

P **Althaea officinalis**

Common Name(s)

Marshmallow, White Mallow

How Used

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	Chemical Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
0	4-AMINO-BUTYRIC-ACID	Root	--	--		
0	4-HYDROXY-BENZOIC-ACID	Leaf	--	--		
0	4-HYDROXY-BENZOIC-ACID	Flower	--	--		
0	4-HYDROXY-BENZOIC-ACID	Root	--	--		
0	8-HYDROXY-3'-SULFO-8-O-BETA-D-GLUCOSIDE-DIOSMETIN	Leaf	--	--		
0	8-HYDROXY-DIOSMETIN-8-GLUCOSIDE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	8-HYDROXY-LUTEOLIN-8-BETA-GENTIOBIOSIDE	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	8-HYDROXY-LUTEOLIN-8-BETA-GLUCOSIDE	Plant	--	--	Bisset, N.G., ed.	1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	8-O-GENTIOBIOSIDE-HYPOLAETIN	Flower	--	--		
32	AESCULETIN	Shoot	--	--		
32	AESCULETIN	Root	--	--		
33	AESCULIN	Shoot	--	--		
33	AESCULIN	Root	--	--		
3	ALANINE	Root	--	--		
0	ALPHA-L-ARABINOFRANOSYL	Plant	--	--		
0	ALTHAEA-D-GLUCAN	Leaf	--	--		
1	ALTHAEA-MUCILAGE-O	Root	--	2200		
0	ALTHAEA-MUCILAGE-OL	Leaf	--	550		
0	ALTHAEA-MUCILAGE-POLYSACCHARIDE	Root	--	--		
0	ALTHAEA-MUCOPOLYSACCHARIDE	Root	--	--		
0	ALTHEIN	Root	20000	20000		
5	ALUMINUM	Root	73	680	0.052378446056560675	
0	ANTHAEA-MUCILAGE	Root	--	--	Leung, A. Y. and Foster, S.	1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
6	ARABINOGLACTAN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	ARABINOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
112	ASCORBIC-ACID	Root	177	1640	0.29152337636866393	
112	ASCORBIC-ACID	Seed	--	1640	0.6461153960063319	
0	ASH	Root	8640	80000	0.35526479427075014	
2	ASPARAGINE	Root	10000	20000	-1.2247448713915892	
0	ASPARAGINIC-ACID	Root	--	--		
7	ASTRAGALIN	Flower	--	--		
7	ASTRAGALIN	Leaf	--	--		
53	BETA-CAROTENE	Root	--	--		
14	BETAINE	Root	40000	40000	2.8276326231219104	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	BUTYRIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
102	CAFFEIC-ACID	Flower	--	--		
102	CAFFEIC-ACID	Root	--	--		
102	CAFFEIC-ACID	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
28	CALCIUM	Root	881	8160	0.08292658679020891	
4	CALCIUM-OXALATE	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996.	Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	CALCIUM-PHOSPHATE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
0	CARBOHYDRATES	Root	87156	807000	-0.2956796137192111	
77	CHLOROGENIC-ACID	Root	--	--		
77	CHLOROGENIC-ACID	Flower	--	--		
77	CHLOROGENIC-ACID	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.	
20	CHOLINE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
24	CHROMIUM	Root	0.2	1.5	-0.26097057892644915	
0	CICHORIN	Root	--	--		
0	CICHORIN	Shoot	--	--		
2	COBALT	Root	0.4	3.3	-0.473581959958559	
57	COUMARIN	Root	--	--		
57	COUMARIN	Shoot	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	D-GALACTOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	D-GALACTURONIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	D-GALACTURONIC-ACID	Leaf	--	--		
0	D-GALACTURONIC-ACID	Root	--	--		
0	D-GLUCOSAMINES	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	D-GLUCURONIC-ACID	Leaf	--	--		
0	D-GLUCURONIC-ACID	Root	--	--		
0	DODECASACCHARIDE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	EO	Flower	--	200	-0.41666386041507664	Wealth of India.
0	EO	Root	54	2000	-0.5605870943160192	
0	EO	Leaf	--	200	-0.99702714807754	Wealth of India.
2	ERUCIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	FAT	Seed	128000	172000	-0.49190584773158025	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FAT	Root	540	5000	-0.596266738718786	
61	FERULIC-ACID	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
61	FERULIC-ACID		Flower	--	--	
61	FERULIC-ACID		Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
61	FERULIC-ACID		Root	--	--	
15	FIBER		Root	83000	83000	-0.11352696502722416 Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUIDE)		Root	--	83000	-0.8363237735654434
0	FIBER(DIETARY)		Root	--	523000	1.3604505714281423
0	GALACTURONIC-ACID		Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	GALACTURONO-RHAMNANS		Plant	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	GALACTURONORHAMNOSE		Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	GLUCAN		Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	GLUCOSAN		Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
7	GLUCOSE	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996.	Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	HEMICELLULOSE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
12	HERNIARIN	Root	--	--		
12	HERNIARIN	Shoot	--	--		
0	HEXASACCHARIDE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
0	HEXOSE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
0	HYDROXYCINNAMIC-ACID	Plant	--	--	Wealth of India.	
0	HYPOLAETIN-4'-METHYL-ETHER-8-O-GLUCOSIDE-3'-SULPHATE	Leaf	--	--		
0	HYPOLAETIN-4'-O-METHYL-ETHER-8-O-BETA-D-GLUCOSIDE	Flower	--	--		
0	HYPOLAETIN-8-GENTIOBIOSIDE	Leaf	2500	4200		
0	HYPOLAETIN-8-O-BETA-D-GLUCOSIDE	Root	--	14		
6	IRON	Root	12	115	-0.2745822990554713	
22	ISOQUERCITRIN	Leaf	--	--		
22	ISOQUERCITRIN	Flower	--	--		
1	ISOSCOPOLETIN	Shoot	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
1	ISOSCOPOLETIN	Root	--	--		
75	KAEMPFEROL	Leaf	--	--	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.	
75	KAEMPFEROL	Root	--	--		
0	KAEMPFEROL-3-O-GLUCOSIDE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
0	KAEMPFEROL-3-BETA-D-(6'-O-P-HYDROXYCINNAMOYL)-GLUCOSIDE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
0	L-ARABINAN	Plant	--	--		
0	L-ARABINOFRUANAN	Root	--	--		
0	L-RHAMNOSE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
0	L-RHAMNOSE	Leaf	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
0	LANOLIN	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
20	LECITHIN	Root	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
27 LINOLEIC-ACID	Seed	67710	91000	-0.13813658130464232	Wealth of India.	
0 LINOLENIC-ACID	Seed	3200	4300	-0.5047948093852286	Wealth of India.	
65 MAGNESIUM	Root	559	5180	1.3932916970467093		
0 MALVALIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.	
14 MANGANESE	Root	0.5	4.4	-0.49333327298005497		
3 MANNOSE	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.	
0 METHYL-PENTOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.	
3 MUCILAGE	Root	50000	350000	1.8163629857243206		
3 MUCILAGE	Plant	--	210000	0.7288213596117523		
3 MUCILAGE	Leaf	60000	157000	1.32247213063027		
0 NARINGENIN-4'-O-BETA-D-GLUCOSIDE	Flower	--	--			
0 NARINGENIN-4'-O-GLUCOSIDE	Flower	--	--			
39 NIACIN	Root	3.4	31	-0.5575871529684362		
0 NONA-SACCHARIDE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.	
18 OLEIC-ACID	Seed	39425	52975	-0.5436146073153726	Wealth of India.	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
25	P-COUMARIC-ACID	Leaf	--	--		
25	P-COUMARIC-ACID	Root	--	--		
25	P-COUMARIC-ACID	Flower	--	--		
13	P-HYDROXY-BENZOIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	P-HYDROXYACETIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	P-HYDROXYPHENYLACETIC-ACID	Root	--	--		
0	P-HYDROXYPHENYLACETIC-ACID	Leaf	--	--		
0	P-HYDROXYPHENYLACETIC-ACID	Flower	--	--		
13	PALMITIC-ACID	Seed	12415	16685	-0.3553353614139409	Wealth of India.
4	PARAFFIN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
24	PECTIN	Root	110000	350000	1.9565371321871459	
0	PENTOSANS	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
4	PHOSPHORUS	Root	277	2560	-0.1682843400899607	
2	PHYTOSTEROLS	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	POLYSACCHARIDE	Root	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	POLYSACCHARIDES	Root	250000	350000		
0	POPULNIN	Flower	--	--		
14	POTASSIUM	Root	1307	12100	-0.26937312186003615	
0	PROTEIN	Root	11664	108000	-0.11693489662361256	
0	PROTEIN	Seed	227000	237000	0.02850063861926227	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
43	PROTOCATECHUIC-ACID	Leaf	--	--		
43	PROTOCATECHUIC-ACID	Flower	--	--		
176	QUERCETIN	Root	--	--		
176	QUERCETIN	Leaf	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
2	QUERCETIN-3'-GLUCOSIDE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	RHAMNOGALACTURONANS	Root	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
15	RIBOFLAVIN	Root	0.1	0.5	-0.7822614262336574	
34	SALICYLIC-ACID	Flower	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
34	SALICYLIC-ACID	Root	--	--		
34	SALICYLIC-ACID	Leaf	--	--		
5	SAPONINS	Root	--	--		
44	SCOPOLETIN	Flower	--	--		
44	SCOPOLETIN	Root	--	--		
44	SCOPOLETIN	Leaf	--	--		
44	SCOPOLETIN	Shoot	--	--		
3	SCOPOLIN	Shoot	--	--		
3	SCOPOLIN	Root	--	--		
0	SCOPOLINE	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite.	1991.
0	SCYLLITOL	Leaf	--	800	-1	
60	SELENIUM	Root	0.4	3.3	-0.12770210212970026	
4	SILICON	Root	0.3	3	-0.32912368458456387	
9	SINAPIC-ACID	Flower	--	--		
9	SINAPIC-ACID	Leaf	--	--		
1	SODIUM	Root	148	1370	0.12512006272941759	
0	SODIUM-BORATE	Plant	--	--	Pakistan Encyclopedia Plantae Medicae.	1986.
11	SORBITOL	Plant	--	--	Pakistan Encyclopedia Plantae Medicae.	1986.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
4	SPIRAEOSIDE	Leaf	--	--		
4	SPIRAEOSIDE	Flower	--	--		
5	STARCH	Root	39960	370000	0.2269958278173157	
8	STEARIC-ACID	Seed	12415	16685	-0.20338219754526743	Wealth of India.
0	STEROLS	Root	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.	
14	SUCROSE	Plant	--	--		Wealth of India.
0	SUGAR	Root	50000	110000	1.0259914748998127	
0	SUGARS	Root	11880	110000	0.05921602494532206	
6	SYRINGIC-ACID	Root	--	--		
6	SYRINGIC-ACID	Leaf	--	--		
6	SYRINGIC-ACID	Flower	--	--		
35	TANNIN	Root	20000	20000	-1.7590478728926933	
31	THIAMIN	Root	1	1	-0.5047871686237749	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	THIAMINE	Root	0.1	1	-0.665115009526749	
3	TILIROSIDE	Flower	--	1900		
3	TILIROSIDE	Leaf	--	2500		

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4	TIN	Root	3	29	1.2720232250646093	
22	UMBELLIFERONE	Shoot	--	--		
22	UMBELLIFERONE	Root	--	--		
0	URONIC-ACID	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
3	VALINE	Root	--	--		
24	VANILLIC-ACID	Leaf	--	--		
24	VANILLIC-ACID	Flower	--	--		
24	VANILLIC-ACID	Root	--	--		
0	WATER	Root	--	892000 0.8034636135635553		
0	XYLAN	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
3	XYLOSE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.	
77	ZINC	Root	--	--		